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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,576	02/02/2001	Russell Allen Monk	31456/204621	7932

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EXAMINER

VO, HAI

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 01/15/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/776,576

Applicant(s)

MONK ET AL

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Election/Restrictions

1. This application contains claims 14, 15 drawn to an invention nonelected with traverse in Paper No. 7. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 2, and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al (US 6,093,481) in view of Day (US 5,589,243) substantially as set forth in Paper no. 4.
4. Claims 1, 2 and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,589,243) in view of Hansen (US 5,870,965) substantially as set forth in Paper no. 4.
5. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johannsen (US 3,964,354) in view of Hansen (US 5,870,965). Johannsen teaches the composite member for use in the construction of boat hulls having an extruded, rigid, skived foam core **10** laminated to a pair of skins of reinforced plastics **16** by an adhesive layer (figure 4, column 2, lines 37-51). Johannsen does not teach the foam

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core made of polypropylene homopolymer. Hansen discloses a high performance boat comprising a foam stabilizing member made from a closed cell polypropylene that is coated with a plastic protective material (abstract and column 6, lines 1-7).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the closed cell polypropylene foam being a foam core of Day motivated by the desire to provide a buoyant foam core that does not absorb water and withstands the harsh environment encountered by a high speed watercraft including normal docking and moorage bumping.

With regard to claims 6 and 7, the combination of the cited art is silent as to the thickness ranges of the foam core and the skin layer. However, such as variable would have been recognized by one skilled in the art as dependent upon the intended use of the product, such that the thicker the core, the more important shear deflection becomes, to the point of exceeding deflection due to bending; or the strength and stiffness of the composite can be structurally improved by increasing the thickness of the skin. As such, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the foam core and the skin having the thickness within the range as claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With regard to claims 8 and 9, Hansen is using the same polypropylene foam to form the core as Applicant, it is the examiner's position that the foam density, shear strength of the foam would inherently be present within the range instantly claimed.

Response to Arguments

6. Applicant's arguments filed 10/29/2002 have been fully considered but they are not persuasive.
7. The art rejections over Lynn in view of Day are maintained because of the following reasons. Applicant argues that there is no motivation to combine the insulation panels of Lynn with the structural composite panels of Day because the foam core of Lynn does not contain alternating layers of fibrous webs, Lynn core is a rigid polypropylene foam core and there is no motivation to create grooves or recesses as disclosed in Day. This is not found to be persuasive. The foam composite in both Lynn and Day is comprised of a similar layer construction, a foam core sandwiched between the skin layers. Lynn discloses the skin layer can be an aluminum foil, fibrous material, reinforced plastics (column 3, lines 49-55, and column 4, lines 50-65) whereas Day discloses the skin layer can be a fiber reinforced plastic, aluminum, plywood (column 8, lines 52-55). The structure and material similarity are sufficient to combine Lynn and Day and motivation to create grooves or recesses in the foam composite of Lynn is to fill the adhesive within the recesses to enhance the bonding between the core and the skins.

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8. The art rejections over Day in view of Hansen are maintained because of the following reasons. Applicant argues that Hansen's stabilizing units, beyond being useful in a watercraft and made of polypropylene, have absolutely no relation to Day's structural panels. This is not found persuasive. Day discloses the rigid reinforced foam composite can be used in a wide variety of applications such as boats, buildings, aircraft (column 1, lines 11-16).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Tue-Fri, 8:30-6:00 and on alternating Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1771